Ophthalmology Snapshot

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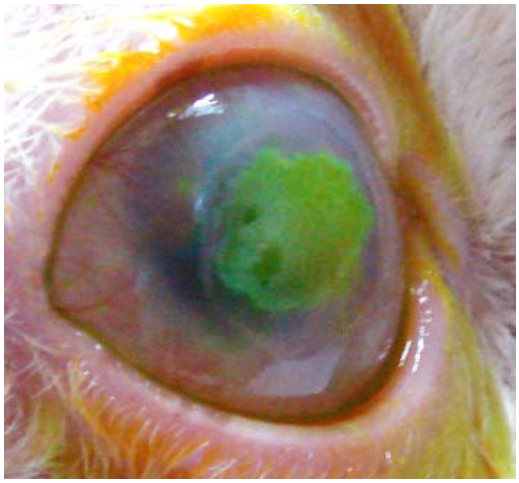

Figure 1. Right cornea and adjacent ocular structures of the Persian kitten.

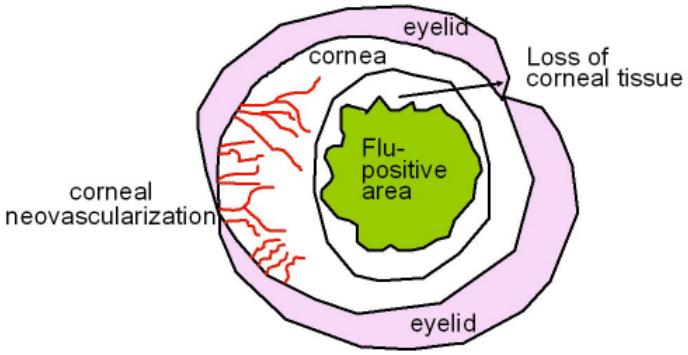

Figure 2. Schematic diagram of the cornea and adjacent ocular structures corresponding to figure 1.

History

A 5 month-old female Persian kitten had shown photophobia, blepharospasm and conjunctival hyperemia on her right eye for ten days before she was brought in to the Ophthalmology Clinic, Small Animal Teaching Hospital, Chulalongkorn University. The owner first noticed slight lacrimation a week ago and applied 0.1% dexamethazone eye drop into the kitten's eye twice daily. The kitten showed better response to the eye drop however, her eye had become worse after 2 days of topical administration when the owner decided to discontinue the eye drop.

Ophthalmic examination with a standard focal light source revealed blepharitis, conjunctivitis, corneal opacity and corneal neovascularization. Special corneal staining with fluorescein dye showed a positive staining on the center of the cornea, approximately 8mm in diameter. Surrounding the fluorescein positive-staining area showed a slight but noticeable loss of some corneal tissue.

Questions

1. What is your diagnosis?
2. How can you treat this kitten's eye?

(For better quality, figures can be viewed in the TJVM website.)

Please turn to the next page for answers .....

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Answers

1. Ulcerative keratitis

2. Treatment of ulcerative keratitis depends on the etiology, identification of factors affecting wound healing process, appropriate medical treatment, selection of surgical therapy and wound management. It is important that the etiology of ulceration is ruled out and eliminated (Feline herpesvirus is a common cause of ulcerative keratitis in cat especially in kitten. Trauma is also a common cause as well as bacterial infection.)

Several topical anti-viral drugs are available in the market if herpesviral infection is diagnosed. Topical antibiotics should be administered to prevent secondary infection. In this case, an ulcer had progressed (the loss of corneal tissue around the fluorescein-positive area and the kitten's discomfort); therefore aggressive therapy such as an hourly to every 2 hours of topical administration is suggested during the first 3-5 days of treatment. Topical atropine sulfate should be used to relieve ocular pain. Overuse of atropine should be avoided because it can decrease tear production. If topical atropine is necessary, however, a supplementation of artificial tear is recommended to facilitate corneal wound healing.

Surgical therapy (such as nictitan flap, conjunctival flap, conjunctival graft) can be considered for this kitten or when the ulcer depth is greater than 50% of the corneal thickness. This kitten is strongly recommended to wear an Elizabethan collar at all times to prevent self trauma that may worsen the lesion. The owner should be well-informed not to apply any topical drug unless it is prescribed by the veterinary ophthalmologist.

Comments

Fluorescein staining test is recommended to perform on all eyes showing pain in order to rule out ulcerative keratitis.

Anterior uveitis should be evaluated as a common complication of ulcerative keratitis due to bacterial infection.

References

Powell C.C., 2003. Feline corneal disease I & II. Western Veterinary Conference, 2003.

Van der Woerdt A., 2001. Feline ophthalmology. Waltham/OSU symposium; Small animal ophthalmology.